

IN THE CLAIMS:

Please CANCEL claims 13-15 and 17 without prejudice to or waiver of their subject matter, AMEND claims 1, 2, 4, 5, 12, 16, and 18, and ADD claims 21-26, as follows.

1. (Currently Amended) A recording apparatus provided with a stepping motor as an actuator, comprising:
 - storage means for storing and holding information regarding a final exciting phase of the stepping motor upon entering a software power off state in which consumption of electrical power of said recording apparatus is restricted by changing a condition of a clock signal to control said recording apparatus; and
 - control means for starting excitation of the stepping motor based on the information regarding the final exciting phase, read out from said storage means, without performing phase alignment of the stepping motor, when said recording apparatus restarts from the software power off state[[]], said control means performing a phase alignment of said stepping motor at a state of hardware power off,
 - wherein the phase alignment of said stepping motor is a process for driving said stepping motor with a predetermined number of pulses to equalize a mechanical phase with an electrical phase of said stepping motor.

2. (Currently Amended) A recording apparatus provided with a stepping motor as an actuator, comprising:

storage means for storing and holding information regarding a final exciting phase of the stepping motor and information regarding a termination status indicating the presence/absence of an error in said recording apparatus at the transition to a software power off in which a consumption electrical power is restricted by changing a condition of clock signal to control said recording apparatus ~~an abnormality at the time of entering a software power off state~~; and

control means for, when said recording apparatus restarts from the software power off state, starting excitation of the stepping motor based on the information regarding the final exciting phase, read out from said storage means, without performing phase alignment of the stepping motor when the information regarding the termination status is normal, and performing phase alignment of the stepping motor when the information regarding the termination status is abnormal[[]],

wherein the phase alignment of said stepping motor is a process for driving said stepping motor with a predetermined number of pulses to equalize a mechanical phase with an electrical phase of said stepping motor.

3. (Previously Presented) The recording apparatus according to claim 2, wherein said control means starts the phase alignment of the stepping motor based on the information regarding the final exciting phase when the information regarding the termination status is abnormal.

4. (Currently Amended) A recording apparatus provided with driving means for driving a member to be driven as a driving source for a stepping motor, comprising:

storage means for storing and holding information regarding a final exciting phase of the stepping motor upon entering a software power off state in which consumption of electrical power by said recording apparatus is restricted by changing a condition of a clock signal to control said recording apparatus;

a sensor, said sensor detecting whether the driven member moves by a predetermined number of pulses when the predetermined number of pulses is applied to the stepping motor at a standby position; and

control means for applying the predetermined number of pulses based on the information regarding the final exciting phase, read out from said storage means, without performing phase alignment of the stepping motor when said recording apparatus restarts from the software power off state, when said sensor detects movement by the predetermined number of pulses, and for performing phase alignment of the stepping motor when said sensor does not detect movement by the predetermined number of pulses[[.]], said control means performing a phase alignment of said stepping motor at a state hardware power off,

wherein the phase alignment of said stepping motor is a process for driving said stepping motor with a predetermined number of pulses to equalize a mechanical phase with an electrical phase of said stepping motor.

5. (Currently Amended) A recording apparatus provided with driving means for driving a member to be driven as a driving source for a stepping motor, comprising:

storage means for storing and holding information regarding a final exciting phase of the stepping motor upon entering a software power off state in which consumption of electrical power by said recording apparatus is restricted by changing a condition of a clock signal to control said recording apparatus;

a sensor, said sensor detecting a rotation amount or a corresponding value of the stepping motor during the software power off state; and

control means for determining, when said recording apparatus restarts from the software power off state, an excitation phase corresponding to a position of a rotor of the stepping motor at the time of the restart, based on the rotation amount of the stepping motor detected by said sensor and the information regarding the final exciting phase read from said storage means, and starting the excitation of the stepping motor from the determined excitation phase without performing phase alignment of the stepping motor[[.]], said control means performing a phase alignment of said stepping motor at a state of hardware power off,

wherein the phase alignment of said stepping motor is a process for driving said stepping motor with a predetermined number of pulses to equalize a mechanical phase with an electrical phase of said stepping motor.

6. (Previously Presented) The recording apparatus according to claim 1, wherein said recording apparatus is a serial type recording apparatus.

7. (Previously Presented) The recording apparatus according to claim 6, wherein the stepping motor is one of a carriage driving motor, a print medium conveying motor, a print medium feeding motor, and a motor for driving a recording head maintenance mechanism.

Claims 8-11 (Cancelled).

12. (Currently Amended) A recording apparatus provided with a stepping motor as an actuator to perform recording on the basis of image data inputted from an outside, said apparatus, comprising:

drive means for changing an exciting phase of the stepping motor to step-drive the stepping motor;

storage means for ~~storing and holding information regarding~~ a final exciting phase of the stepping motor upon entering a software power off state; ~~in which consumption of electrical power by said recording apparatus is restricted; and~~

second storage means capable of holding said image data at a state of power on and not holding said image data at a state of software power off; and

control means for starting excitation of the stepping motor based on the ~~information regarding the final~~ exciting phase stored in said storage means at the time of restarting from the software power off state of said apparatus, said control means performing a phase alignment of said stepping motor at a state of hardware power off,

wherein the phase alignment of said stepping motor is a process for driving said stepping motor with a predetermined number of pulses to equalize a mechanical phase with an electrical phase of said stepping motor.

Claims 13-15 (Cancelled).

16. (Currently Amended) A recording apparatus provided with a stepping motor as an actuator, comprising:

drive means for changing an exciting phase of the stepping motor to step-drive the stepping motor;

storage means for storing and holding information regarding a final exciting phase of the stepping motor upon entering a software power off state in which consumption of electrical power by said recording apparatus is restricted by changing a condition of a clock signal to control said recording apparatus;

phase alignment means for aligning a mechanical phase of the stepping motor and an electrical phase stored in said storage means;

a driven member driven by the stepping motor;

a sensor, said sensor detecting whether said driven member moves by a predetermined number of pulses from a standby position of the member; and

control means for starting excitation of the stepping motor based on the information regarding the final exciting phase stored in said storage means to drive said driven member by the predetermined number of pulses at the time of restarting from the software power off state of said apparatus, without performing the phase alignment by said

phase alignment means, when said sensor detects that said driven member is moved by the predetermined number of pulses, and performing the phase alignment by said phase alignment means when said sensor detects that said driven member is not moved by the predetermined number of pulses.

Claim 17 (Cancelled).

18. (Currently Amended) The recording apparatus according to claim 1, wherein the phase alignment of the stepping motor is performed in a manner so that the stepping motor is driven by a predetermined number of pulses at a self-starting region of the stepping motor as a driving region and the mechanical phase and the electrical phase of the stepping motor are identical.

19. (Previously Presented) The recording apparatus according to claim 1, wherein said storage means is a non-volatile memory.

20. (Previously Presented) The recording apparatus according to claim 12, wherein said storage means is a non-volatile memory.

21. (New) A recording apparatus provided with a stepping motor as an actuator to perform recording on the basis of image data inputted from an outside, said apparatus comprising:

drive means for changing an exciting phase of the stepping motor to step-drive the stepping motor;

storage means capable of holding information on a final exciting phase of said stepping motor at a state of software power off and holding information on a termination status indicating the presence/absence of an error in said recording apparatus at the transition to a software power off;

second storage means capable of holding said image data at a state of power on and not holding said image data at a state of software power off; and

control means for starting excitation of the stepping motor from said final exciting phase stored in said storage means at the time of restarting from a software power off state of said apparatus, said control means performing a phase alignment of said stepping motor if information on the termination status is abnormal,

wherein the phase alignment of said stepping motor is a process for driving said stepping motor with a predetermined number of pulses to equalize a mechanical phase with an electrical phase of said stepping motor.

22. (New) The recording apparatus according to claim 2, wherein said error is based on that said stepping motor comes out of step.

23. (New) The recording apparatus according to claim 1, wherein said storage means is provided within said control means.

24. (New) The recording apparatus according to claim 2, wherein said storage means is provided within said control means.

25. (New) The recording apparatus according to claim 1, wherein the state of power on is shifted to the state of software power off if said apparatus is not in use for a long time.

26. (New) The recording apparatus according to claim 2, wherein the state of power on is shifted to the state of software power off if said apparatus is not in use for a long time.